

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant: Stephen B. SIEGEL ) Group Art Unit: 1762  
Serial No: 10/753,947 ) Primary Examiner: Marianne L. Padgett  
Filed: January 7, 2004 ) Attorney Docket No: 6987/90135  
For: UV Curing Method and Apparatus ) Confirmation No. 5528

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

**Mail Stop: RCE**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

The patents, published patent applications, abstracts, and publications listed below were located during a prior patent search of the above-identified application or cited in a related U.S. Patent Application or an International Search Report or in an International Preliminary Report on Patenability of a corresponding or related International Patent Application. The patents, published patent applications, abstracts, and publications listed below generally relate to the subject matter of the invention, but do not fairly teach or suggest the claimed UV Curing Method and Apparatus. Copies of the listed patents, published patent applications, abstracts, and publications, are enclosed for the consideration of the Primary Examiner.

1. Hochestein U.S. Patent Published Application No. US2001/0030866 A1 published October 18, 2001 pertains to an LED Integrated Heat Sink.
2. Ostler et al. U.S. Patent Published Application No. US2001/0046652 A1 published November 29, 2001 pertains to a Light Emitting Diode Light Source for Curing Dental Composites.

3. Matsumoto et al. U.S. Patent Published Application No. US2001/0052920 A1 published December 20, 2001 pertains to an Ink Jet Printer and Ink Jet Printing Method.
4. Codos U.S. Patent Published Application No. US2002/0044188 A1 published April 18, 2002 pertains to a Method and Apparatus for Ink Jet Printing.
5. Sweatt et al. U.S. Patent Published Application No. US2002/0074554 A1 published June 20, 2002 pertains to a Microoptical System and Fabrication Method Therefor.
6. Dowling et al. U.S. Patent Published Application No. US2002/0074559 A1 published June 20, 2002 pertains to Ultraviolet Light Emitting Diode Systems and Methods.
7. Cleary et al. U.S. Patent Published Application No. US2002/0149660 A1 published October 17, 2002 pertains to an Apparatus and Method For Setting Radiation-Curable Ink.
8. Kanie et al. U.S. Patent Published Application No. US2002/0175299 A1 published November 28, 2002 pertains to a Ultraviolet Irradiation Apparatus And Method Of Forming Cured Coating Film Using The Apparatus.
9. Ramler U.S. Patent No. 4,010,374 granted March 1, 1977 pertains to a Ultraviolet Light Processor And Method of Exposing Surfaces to Ultraviolet Light.
10. Contois et al. U.S. Patent No. 4,980,701 granted December 25, 1990 pertains to a Non-Impact Printhead Using a Mask with a Dye Sensitive to and Adjusted by Light in a First Spectrum to Balance the Transmission of Light in a Second Spectrum Emitted by an LED array.
11. Le Creff U.S. Patent No. 4,990,971 granted February 5, 1991 pertains to a Light Emitting Diode Network.
12. Ignatius et al. U.S. Patent No. 5,278,432 granted January 11, 1994 pertains to an Apparatus For Providing Radiant Energy.
13. Kennedy U.S. Patent No. 5,420,768 granted May 30, 1995 pertains to a Portable LED Photocuring Device.
14. Kennedy et al. U.S. Patent No. 5,634,711 granted June 3, 1997 pertains to a Portable Light Emitting Apparatus With A Semiconductor Emitter Array.

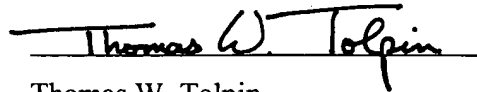
15. D'Silva U.S. Patent No. 5,762,867 granted June 9, 1998 pertains to an Apparatus And Method For Activating Photoactive Agents.
16. Lin U.S. Patent No. 5,764,263 granted June 9, 1998 pertains to a Printing Process, Apparatus, and Materials for the Reduction of Paper Curl.
17. Itou U.S. Patent No. 5,986,682 granted November 16, 1999 pertains to a Recording Apparatus and Recording Method.
18. Caiger et al. U.S. Patent No. 6,145,979 granted November 14, 2000 pertains to an Ink Jet Printer with Apparatus for Curing Ink and Method.
19. Masuda et al. U.S. Patent No. 6,188,086 B1 granted February 13, 2001 pertains to a Light Emitting Diode Array And Optical Image Forming Apparatus With Light Emitting Diode Array.
20. Roth U.S. Patent No. 6,354,700 B1 granted March 12, 2002 pertains to a Two-Stage Printing Process and Apparatus for Radiant Energy Cured Ink.
21. Eastlund et al. U.S. Patent No. 6,425,663 B1 granted July 30, 2002 pertains to a Microwave Energy Ink Drying System.
22. Hu et al. U.S. Patent No. 6,447,112 B1 granted September 10, 2002 pertains to a Radiation Curing System and Method for Inkjet Printers.
23. Cleary et al. U.S. Patent No. 6,457,823 B1 granted October 1, 2002 pertains to an Apparatus And Method For Setting Radiation-Curable Ink.
24. Vackier et al. U.S. Patent No. 6,525,752 B2 granted February 25, 2003 pertains to an Exposure Unit With Staggered LED Arrays.
25. Biegelsen et al. U.S. Patent No. 6,536,889 B1 granted March 25, 2003 pertains to Systems and Methods for Ejecting or Depositing Substances Containing Multiple Photoinitiators.
26. Young U.S. Patent No. 6,561,640 B1 granted May 13, 2003 pertains to Systems and Methods of Printing with Ultraviolet Photosensitive Resin-Containing Materials Using Light Emitting Devices.
27. Kramer U.S. Patent No. 6,630,286 B2 granted October 7, 2003 pertains to a Process for Preparing a Printing Plate.

28. Kennedy et al. U.S. Patent No. 6,683,421 B1 granted January 27, 2004 pertains to an Addressable Semiconductor Array Light Source for Localized Radiation Delivery.
29. Jin et al. U.S. Patent No. 6,783,810 B2 granted August 31, 2004 pertains to Reducing Polymerization Stress By Controlled Segmental Curing.
30. Abstract: Noburu et al. Japanese Patent Publication Application No. JP 2000-268416 published September 29, 2000 of Global Mach KK pertains to an Optical Disk Adhering Apparatus.
31. Abstract: Eiji et al. Japanese Patent Publication Application No. JP 2001-209980 published August 3, 2001 of Matsushita Electric Ind. Co. Ltd. pertains to a Method and Device For Production of Optical Information Recording Medium.
32. Abstract: Shigeru et al. Japanese Patent Publication Application No. JP 2005-129662 published May 19, 2005 of Iwasaki Electric, Co. Ltd. pertains to Manufacture of Light Emission Diode Lamp.
33. Publication: *"Photoinitiators for UV Curing Key Products Selection Guide, Coating Effects"*, by Ciba Specialty Chemicals, Edition 2001, Switzerland.
34. Publication: *"Photoinitiators for UV Curing Formulators' Guide for Coatings, Additives"*, by Ciba Specialty Chemicals, Edition 2001, Switzerland.
35. Publication: *"Optical Properties of Si-Doped  $Al_xGa_{1-x}N/Al_yGa_{1-y}N$  ( $x=0.24-0.53$ ,  $y=0.11$ ) Multi-Quantum-Well Structures"* by H. HIRAYAMA and Y. AOYAGI, The Institute of Physical and Chemical Research, Saitama, Japan, MRS Internet J. Nitride Semicond. Res. 4S1,G3.74 (1999).

Authorization is hereby given to charge any fees in connection with this Second Supplemental Information Disclosure Statement or any deficiency in fees or any other fees in connection with the subject application to our Deposit Account No. 23-0920.

Dated: February 23, 2006

Respectfully submitted,

A handwritten signature in black ink, reading "Thomas W. Tolpin", is written over a horizontal line.

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Substitute for form 1449A/PTO and 1449B/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

### Complete if Known

Application Number	10/753,947
Filing Date	January 7, 2004
First Named Inventor	Stephen B. Siegel
Group Art Unit	1762
Primary Examiner Name	Marianne L. Padgett
Confirmation No.	5528
Attorney Docket Number	6987/90135

Sheet 1 of 1

### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US2001/0030866A1	10-18-2001	Hochstein	
	2	US2001/0046652A1	11-29-2001	Ostler et al.	
	3	US2001/0052920A1	12-20-2001	Matsumoto et al.	
	4	US2002/0044188A1	04-18-2002	Codos	
	5	US2002/0074554A1	06-20-2002	Sweatt et al.	
	6	US2002/0074559A1	06-20-2002	Dowling et al.	
	7	US2002/0149660A1	10-17-2002	Cleary et al.	
	8	US2002/0175299A1	11-28-2002	Kanie et al.	
	9	4,010,374	03-01-1977	Ramler	
	10	4,980,701	12-25-1990	Contois et al.	
	11	4,990,971	02-05-1991	Le Creff	
	12	5,278,432	01-11-1994	Ignatius et al.	
	13	5,420,768	05-30-1995	Kennedy	
	14	5,634,711	06-03-1997	Kennedy et al.	
	15	5,762,867	06-09-1998	D'Silva	
	16	5,764,263	06-09-1998	Lin	
	17	5,986,682	11-16-1999	Itou	
	18	6,145,979	11-14-2000	Caiger et al.	
	19	6,188,086 B1	02-13-2001	Masuda et al.	
	20	6,354,700 B1	03-12-2002	Roth	
	21	6,425,663 B1	07-30-2002	Eastlund et al.	
	22	6,447,112 B1	09-10-2002	Hu et al.	
	23	6,457,823 B1	10-01-2002	Cleary et al.	
	24	6,525,752 B2	02-25-2003	Vackier et al.	
	25	6,536,889 B1	03-25-2003	Biegelsen et al.	
	26	6,561,640 B1	05-13-2003	Young	
	27	6,630,286 B2	10-07-2003	Kramer	
	28	6,683,421 B1	01-27-2004	Kennedy et al.	
	29	6,783,810 B2	08-31-2004	Jin et al.	

### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
	30	Japanese Patent Publication Application No. JP 2000-268416 B	09-29-2000	Global Mach KK		√
	31	Japanese Patent Publication Application No. JP 2001-209980 B	08-03-2001	Matsushita Electric Ind. Co. Ltd.		√
	32	Japanese Patent Publication Application No. JP 2005-129662 B	05-19-2005	Iwasaki Electric Co. Ltd.		√

Examiner Signature	Date Considered
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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10/24/2001 W&K Substitute for Form PTO-SB/08A, which is a USPTO Substitute for form 1449A/PTO and 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/753,947
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				First Named Inventor	Stephen B. Siegel
				Group Art Unit	1762
				Primary Examiner Name	Marianne L. Padgett
				Confirmation No.	5528
Sheet	2	of	1	Attorney Docket Number	6987/90135

OTHER ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>6</sup>
	33	Publication: "Photoinitiators for UV Curing Key Products Selection Guide, Coating Effects", by Ciba Specialty Chemicals, Edition 2001, Switzerland.		√
	34	Publication: "Photoinitiators for UV Curing Formulators' Guide for Coatings, Additives", by Ciba Specialty Chemicals, Edition 2001, Switzerland.		√
	35	Publication: "Optical Properties of Si-Doped Al <sub>x</sub> Ga <sub>1-x</sub> N/Al <sub>y</sub> Ga <sub>1-y</sub> N (x=0.24-0.53, y=0.11) Multi-Quantum-Well Structures" by H. Hirayama and Y. Aoyagi, The Institute of Physical and Chemical Research, Saitama, Japan, MRS Internet J. Nitride Semicond. Res. 4S1,G3.74 (1999).		√

Examiner Signature		Date Considered	
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